

REMARKS

This application has been carefully reviewed in light of the Office Action dated September 8, 2006. Claims 4, 5 and 24 to 28 are pending in the application, of which Claims 24, 26, 27 and 28 are independent. Reconsideration and further examination are respectfully requested.

Applicant thanks the Examiner for the indication that Claims 4, 5 and 24 to 28 contain allowable subject matter and would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 101 as set forth below.

Claims 24, 27 and 28 were rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

Turning to specific claim language, amended independent Claim 24 is directed to a color conversion method of converting three-dimensional input data representing an image by using a three-dimensional look-up table having rectangularly spaced grid points, grid positions of the three-dimensional look-up table having non-uniform intervals so as to generate output data representing a color converted image, the method comprising the step of performing interpolation processing using four grid points in eight grid points ($P000 = P(X0, Y0, Z0)$, $P001 = P(X0, Y0, Z1)$, $P010 = P(X0, Y1, Z0)$, $P011 = P(X0, Y1, Z1)$, $P100 = P(X1, Y0, Z0)$, $P101 = P(X1, Y0, Z1)$, $P110 = P(X1, Y1, Z0)$, $P111 = P(X1, Y1, Z1)$) of a unit rectangular hexahedron which includes an input data value (X, Y, Z where $X0 \leq X \leq X1$, $Y0 \leq Y \leq Y1$, $Z0 \leq Z \leq Z1$). The interpolation processing comprises the steps of obtaining weight values (u' , v' , w'), based on the input data value (X, Y, Z), wherein the weight values are expressed as follows:

$$u' = \text{INT}(((X-X0)/(X1-X0))L),$$

$$v' = \text{INT}(((Y-Y_0)/(Y_1-Y_0))L),$$

$$w' = \text{INT}(((Z-Z_0)/(Z_1-Z_0))L),$$

where a value of a predetermined constant (L) is greater than each of the grid intervals (X1-X0, Y1-Y0, Z1-Z0) of the three-dimensional look-up table, and is a power of 2;
determining a relationship among the weight values (u', v', w'); and calculating a value of the output data (P) for the input data value by tetrahedral interpolation using the output values for the four grid points and the weight values, based on determining result by the following equations:

$$\text{when } u' > v' > w', P = ((L-u')P_{000} + (u'-v')P_{100} + (v'-w')P_{110} + w'P_{111})/L,$$

$$\text{when } u' > w' = v', P = ((L-u')P_{000} + (u'-w')P_{100} + (w'-v')P_{110} + v'P_{111})/L,$$

$$\text{when } w' = u' > v', P = ((L-w')P_{000} + (w'-u')P_{001} + (u'-v')P_{101} + v'P_{111})/L,$$

$$\text{when } w' = v' = u', P = ((L-w')P_{000} + (w'-v')P_{001} + (v'-u')P_{011} + u'P_{111})/L,$$

$$\text{when } v' > w' = u', P = ((L-v')P_{000} + (v'-w')P_{010} + (w'-u')P_{011} + u'P_{111})/L,$$

$$\text{when } v' = u' > w', P = ((L-v')P_{000} + (v'-u')P_{010} + (u'-w')P_{110} + w'P_{111})/L.$$

Claims 26, 27 and 28 are directed to an apparatus, a computer-readable storage medium and a computer-executable program stored on a computer-readable storage medium, respectively, substantially in accordance with the method fo Claim 24ss.ss

Claim 24 has been amended to clarify that it is directed to a color-conversion method of converting three-dimensional input data so as to generate output data representing a color converted image. Without conceding the correctness of the rejection, Applicant submits that Claim 24 is now directed to a method that produces a practical effect, namely the generation of output data representing a color converted image from

three-dimensional input data representing the image. Accordingly, Applicant submits that Claims 24 and 26 are now in condition for allowance and respectfully requests same.

Furthermore, and again without conceding the correctness of the rejection, Claims 27 and 28 have been amended along the lines suggested by the Examiner in order to clarify that they are directed to statutory subject matter. Accordingly, Applicant submits that Claims 27 and 28 are also in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for at least the same reasons. However, as each dependent claim is also deemed to define an additional aspect of the invention, individual consideration of each dependent claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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